



Third Ward Soil Remediation Project Wisconsin Gas MGP Site



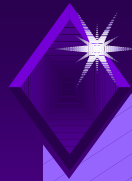
ARCADIS Geraghty & Miller, Inc.
Michael S. Maierle, P.E.



***Former Third Ward
MANUFACTURED GAS PLANT SITE***

***SOIL CLEANUP
PROJECT***





Third Ward MGP History:

- ✓ ***Began Operations - 1852***
Coal Gas > Water Gas > Oil Gas
- ✓ ***Ended Gas Manufacturing - 1950's***
Natural Gas to Milwaukee
- ✓ ***Environmental Studies - 1984 - 1992***
- ✓ ***Cleanup - 1998 - 1999***

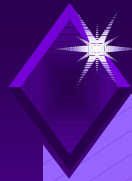
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Old Third Ward MGP - 1917



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Project Organization:

Wisconsin Gas

Project Management & Oversight

Engineering Consultants

***Engineering, Management
& Site Support***

ARCADIS Geraghty & Miller

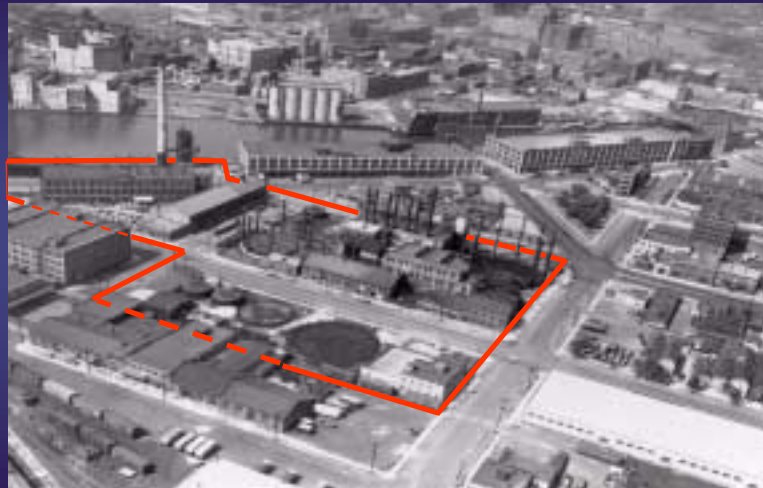
Contractor - Thermal Treatment

Dustcoating, Inc.

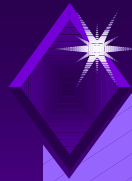
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MGP Site - 4 Block Area



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Site Remediation Strategy:

✓ For Soils...

..Best Attainable with Technology

✓ On-Site Thermal Desorption

✓ Excavation to Water Table

✓ Removal of Foundations to W.T.

✓ Fill and Replace with Treated Soil

...25% new fill

✓ Compact to Full Structural Capacity

....ideal for foundations

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Low Temperature Thermal Desorption

1,200 °F Soil Desorber.....

..... 1,800 °F Oxidizer Gases




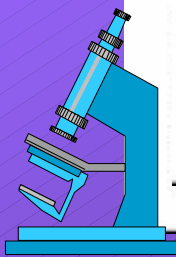
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Cleanup Standards

.....Direct Contact, Non-Industrial

.....Groundwater Protection



WISCONSIN LABORATORY INC. 1000 N. 10TH ST. SUITE 100 WISCONSIN, WI 53090

Sample Identification: 100-001
Sample Type: Soil
Laboratory Log Number: 10000-01

Substrate: 100-001
Analysis: 100-001
Unit: (mg/kg)

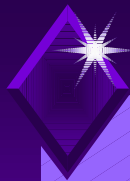
SP-Method 100.3
Analysis Date: 01/10/00
Total value, %

SP-Method 100.3
Analysis Date: 01/10/00
Preparation Date: 01/10/00
Analysis Date: 01/10/00

Element	Concentration	Unit	Method
Trace	0.0001	mg/kg	100.3
Trace	0.0001	mg/kg	100.3
Trace	0.0001	mg/kg	100.3

Method Key: 100-001
100-001

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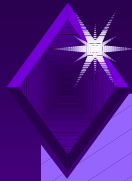
Vital Statistics:

✓ **Treated 89,700 Tons Soil**

84,000 Tons Original

(Re-Treated 5,700 Tons Soil)

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Vital Statistics:

- ✓ ***Clean Concrete Rubble - Recycled***
12,300 Tons Sub-Demolition
- ✓ ***Steel & Metals - Recycled***
260 Tons
- ✓ ***Wood / Debris - Landfill Disposal***
1,500 Tons
- ✓ ***Groundwater - Purified & Discharged***
563,200 Gallons

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East Block - Milwaukee DCD



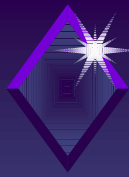
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West Block - Peters Investment Co.



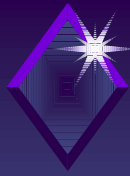
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Demolition



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Gas Holder Excavation and Removal



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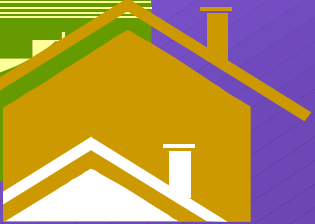
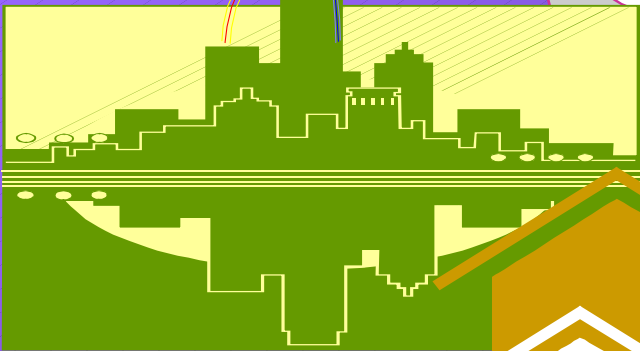
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LAND RECYCLING...



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Development...



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